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TECHNICAL NOTES

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Simple Measures Can Improve Wisconsin's Farm Woodlands

The Mixed Oak Type

Continuous harvests of forest products can be obtained for several decades from the better stocked mixed oak stands in Wisconsin by following judicious cutting practices and protecting these areas from fire and livestock. Often, too, the volume of such woodlands can be increased and the quality improved while carrying on a program of this kind.

These conclusions are based on a 10-year summary of cutting records and sample-plot growth data for the Dundee Timber Harvest Forest in Fond du Lac County, east-central Wisconsin. Because of the similarity between the mixed oak stands on the 64-acre Dundee tract and those found elsewhere in the State, the results obtained from this case study can be applied, with slight modifications to meet individual situations and needs, to many hundreds of farm-owned woodlands throughout southern Wisconsin.

During the first 10-year cutting cycle, the average gross sawtimber volume of the Dundee tract increased from 5,327 to 6,451 board feet per acre (table 1). Trees that were saplings and small poles in 1947 and had grown to saw log dimension by 1957 added 333 board feet per acre to the stands. During the same period total cut was 1,039 board feet and mortality 89 board feet, so that the gross increment was actually 2,252 board feet per acre.

In terms of total board-foot volume, northern red oak comprises 61 percent of the 1947 stand; sugar maple, 17 percent; American and slippery elms, 6 percent; American basswood, 8 percent; and other hardwoods, 8 percent. Corresponding post-logging (1957) percentages were 65, 15, 7, 4, and 9 respectively.

Unmanaged woodlands almost always need to be "cleaned up" before an intensive program of silviculture can be undertaken. The Dundee Timber Harvest was no exception to this general rule. During the past 10 years, the entire 64-acre unit has been given an improvement cut which rogued out undesirable species, over-age and decadent trees, and poorly-formed stems. Approximately 45,000 board feet, net scale, of logs and box bolts, plus about 200 cords of rough wood, were obtained by six periodic logging operations. The gross receipts from this material were sufficient to charge off stumpage at prevailing prices, meet all out-of-pocket expenses, and pay labor at going rates.

Those landowners who have been inclined to believe that forestry practices are applicable only to large acreages of timber should be reassured by the past decade's results for the Dundee woods.

(over)

Table 1.--Gross sawtimber volumes and depletion per acre on
the Dundee Timber Harvest Forest, 10-year period

(In board feet, Scribner Log Rule)

Species	: Stand : volume : in 1947	: 10-year : mortality	: 10-year : cut	: Stand : volume : in 1957
Northern red oak	3,252	41	438	4,183
Sugar maple	922	20	271	988
Slippery elm	328	28	14	453
American basswood	417	0	205	269
White ash	121	0	10	192
White oak	168	0	12	257
Red maple	38	0	20	27
Shagbark hickory	20	0	8	47
Paper birch	51	0	49	19
Bur oak	2	0	2	4
Aspen	8	0	10	0
American elm	0	0	0	2
Black cherry	0	0	0	10
Total	5,327	89	1,039	6,451

There is nothing out of the ordinary about this tract. It has about average productivity (site), and its per-acre volume in 1957 was only 60 percent of that possible under conditions of full stocking.^{1/} Obviously, then, what has been done there to increase the volume and improve the quality of the growing stock during the past 10 years could have been duplicated on scores of farms throughout southern Wisconsin.

Too many farmers wait too long to decide whether they wish to practice good forestry. In the meantime, either their woodlands are depleted to meet periodic financial needs or the stands deteriorate from natural causes (rots, insects, wind, grazing, etc.). Unfortunately, such indecisiveness has spelled the end of many fine woodlands in southern Wisconsin; it is much easier to maintain the productivity of mixed oak stands by proper management than to restore it after they have been seriously downgraded by neglect or abuse.

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^{1/} Gevorkiantz, S. R., and Scholz, H. F. Timber yields and possible returns from the mixed oak farmwoods of southwestern Wisconsin. 72 pp., illus. 1948.